

### **ABSTRACT OF THE DISCLOSURE**

5 The present invention is directed to accounting for crystal cut error data in ion implantation systems, thereby facilitating more accurate ion implantation. One or more aspects of the invention also consider possible shadowing effects that can result from features formed on the surface of a wafer being doped. According to one or more aspects of the invention, crystal cut error data and optionally feature data also are periodically fed forward in one or more ion implantation stages or systems to ascertain how to re-orient the ion beam with respect to the workpiece to achieve desired implantation results.